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Richard David Day

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HICKMAN PALERMO TRUONG & BECKER, LLP

2055 GATEWAY PLACE

SUITE 550

SAN JOSE, CA 95110

EXAMINER

TODD, GREGORY G

ART UNIT

PAPER NUMBER

2457

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/648,420

Applicant(s)

DAY ET AL.

Examiner

GREGORY G. TODD

Art Unit

2457

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 21-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 21-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/C2)
Paper No(s)/Mail Date 9/4/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in response to applicant's request for reconsideration filed, 27 October 2008, of application filed, with the above serial number, on 28 August 2000 in which claims 1, 8, 21, and 28 have been amended in the prior response. Claims 1-14 and 21-34 are pending in the application.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material per se.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be

statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994).

Descriptive material that cannot exhibit any functional interrelationship with the way in which computing processes are performed does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 U.S.C. 101. Thus, Office personnel should consider the claimed invention as a whole to determine whether the necessary functional interrelationship is provided.

The claim scope is undetermined as a reasonable interpretation of the claims can refer to embodiments which are just software. The apparatus claims comprise modules, which are software modules (see p. 18 of specification).

In order to expedite a comprehensive examination of the instant application, the claims rejected under 35 U.S.C.101 (non-statutory) above, are further rejected as set forth below in anticipation of applicant amending these claims to place them within the admissible statutory categories of invention.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-14 and 21-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what the 'network of caching

servers' comprises, nor how the 'network of caching servers differ[ent] from the customer's plurality of web servers', as Fig. 1, for example, teaches each POP having webcaches which can be integrated with the web servers; nor how a customer pays a fee for the use of the different network of caching servers.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-14 and 21-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chauhan (hereinafter "Chauhan", 6,115,752) in view of Gurijala et al (hereinafter "Gurijala", 6,601,090).

As per Claim 1, Chauhan teaches a method, comprising:

receiving a request from a user for a web page at a first web address, the first web address including a hostname (request for address) (at least col. 6, lines 45-53);

determining traffic loads of a plurality of mirrored customer web servers among a customer's plurality of web servers, each of the customer web servers storing the web page (mirrored server round trip times) (at least col. 7, lines 24-42);

determining a customer web server from the plurality of mirrored customer web servers that is appropriate for the request, the customer web server having a traffic load

lower than traffic loads of remaining customer web servers from the plurality of mirrored customer web servers (mirrored server with best route) (at least col. 7, lines 24-42);

determining an IP address of the customer web server (address name server) (at least col. 1, lines 41-53; col. 6, lines 45-63);

directing the request from the user to the customer web server (ONS routing request) (at least Fig. 4); thereafter

receiving a request from the user for content on the web page at a second web address, the second web address including the hostname (request for an address) (at least col. 6, lines 45-53);

determining service metrics of servers in a network of servers (mirrored server round trip times) (at least col. 7, lines 24-42);

determining the server from the network of servers that is appropriate for the request for content, the server having service metrics better than service metrics of remaining servers from the network of servers (mirrored server with best route) (at least col. 7, lines 24-42).

Chauhan does not explicitly teach caching servers as having cached static content thereon to further mirror data of a customer webpage and a customer paying a fee to a service for use of the network of caching servers storing static content for the customer, the caching servers different from the customer's plurality of web servers. However, the use and advantages for using such a cache server is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Gurijala. Gurijala teaches the use of web cache servers wherein an Intranet/customer

accesses web cache servers for static content requested by a user within the Intranet, to decrease costs associated with Internet accesses being used to access the content, with the Web cache servers residing between the Intranet and Internet, and thus, different servers from the internet servers the client is trying to access (at least col. 1:40-67; col. 6:2-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Gurijala's cache servers into Chauhan's system as this would further enhance Chauhan's system to lessen load and traffic and charges/fees on mirror sites and use Chauhan's optimizing address name translating with Gurijala's cache servers so as to limit external accesses to data resulting in costs and load decreases, as Gurijala teaches. Further, it is very well known in the art to use proxy / caching servers to serve static content from a host to users, as Gurijala teaches, and to also use mirror servers as Chauhan teaches.

As per Claim 2.

determining load of servers in the network of servers (at least col. 2, lines 14-33; col. 3, lines 39-53);

wherein determining the server from the network of servers that is appropriate for the request, the server having a latency and a load lower than latency or load of the remaining servers from the network of servers (at least col. 2, lines 14-33; col. 3, lines 39-53).

As per Claim 3.

Chauhan does not teach caching static content. However, the use and advantages for using such caching is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Gurijala:

determining whether the caching server includes the static content;
determining a customer web server that includes the static content when the caching server does not include the static content (at least Gurijala col. 2:31-50; 6:2-15);

retrieving the static content from the web server that includes the static content (at least Gurijala col. 2:31-50; 6:2-15); and

storing the static content from the web server in the caching server (caching static content) (at least Gurijala col. 2:31-50; 6:2-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Gurijala's static page caching into Chauhan's system as this is very well known in the art as to how server caching is performed for client requested static content.

As per Claim 4.

wherein the determining the web server step comprises:

determining traffic loads of the plurality of mirrored customer web servers, each of the customer web servers storing the static content (mirror servers) (at least col. 3, lines 39-53); and

determining a second customer web server from the plurality of mirrored customer web servers that is appropriate for the request, the second customer web server having a traffic load lower than traffic loads of remaining customer web servers

from the plurality of mirrored customer web servers (best route to mirror server) (at least col. 3, lines 39-53).

As per Claim 5.

Chauhan does not teach caching from another server. However, the use and advantages for using such a caching protocol is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Gurijala. Gurijala teaches wherein retrieving the static content from the web server step comprises:

determining an IP address of the second customer web server (at least Gurijala col. 2:31-50; 6:2-15; 4:8-19; URI/IP address of page); and

requesting the static content from the second customer web server at the second customer web server IP address (at least Gurijala col. 2:31-50; 6:2-15; 4:8-19).

As per Claim 6.

wherein the network of servers includes a domain name server (at least col. 1, lines 41-67; Gurijala col. 4:28-30).

As per Claim 7.

wherein the request from the user for the web page is transferred from a first domain name server (local name server) (at least Fig. 4);

wherein the network of servers includes a second domain name server (ONS) (at least Fig. 4; col. 3, lines 23-38); and

wherein the second domain name server determines the customer web server from the plurality of mirrored customer web servers (ONS determines mirror server) (at least col. 3, lines 39-53).

As per Claim 8, Chauhan teaches a method, comprising:

receiving a first request from a client DNS server to resolve a first domain name, the client DNS server receiving a request from a user of a web page address that includes the first domain name (request for address) (at least col. 6, lines 45-53);

determining load measurements of a plurality of mirrored customer web servers among a customer's plurality of web servers, each of the customer web servers addressable by the first domain name, and each of the customer web servers configured to service the request from the user (mirrored server round trip times) (at least col. 7, lines 24-42);

determining a customer web server from the plurality of mirrored customer web servers, the customer web server having a traffic load lower than traffic loads of other customer web servers from the plurality of mirrored customer web servers (mirrored server with best route) (at least col. 7, lines 24-42);

determining an IP address of the customer web server (address name server) (at least col. 1, lines 41-53; col. 6, lines 45-63);

providing the IP address of the customer web server to the client DNS server (LNS) (at least Fig. 4; col. 3, lines 39-53); thereafter

receiving a second request from the client DNS server to resolve a second domain name, the client DNS server receiving a request from the user of a uniform resource locator that includes the second domain name (request for an address) (at least col. 6, lines 45-53);

determining performance metric measurement of servers in a network of servers, each of the caching servers addressable by the second domain name (mirrored server round trip times) (at least col. 7, lines 24-42);

determining a server from the network of servers, the server having performance metrics lower than performance metrics of other servers from the network of servers (mirrored server with best route) (at least col. 7, lines 24-42);

providing the IP address of the server to the client DNS server (LNS) (at least Fig. 4; col. 3, lines 39-53).

Chauhan does not explicitly teach caching servers as having cached static content thereon to further mirror data of a customer webpage and a customer paying a fee to a service for use of the network of caching servers storing static content for the customer, the caching servers different from the customer's plurality of web servers. However, the use and advantages for using such a cache server is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Gurijala. Gurijala teaches the use of web cache servers wherein an Intranet/customer accesses web cache servers for static content requested by a user within the Intranet, to decrease costs associated with Internet accesses being used to access the content, with the Web cache servers residing between the Intranet and Internet, and thus, different servers from the internet servers the client is trying to access (at least col. 1:40-67; col. 6:2-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Gurijala's cache servers into Chauhan's system as this would further enhance Chauhan's system to

lessen load and traffic and charges/fees on mirror sites and use Chauhan's optimizing address name translating with Gurijala's cache servers so as to limit external accesses to data resulting in costs and load decreases, as Gurijala teaches. Further, it is very well known in the art to use proxy / caching servers to serve static content from a host to users, as Gurijala teaches, and to also use mirror servers as Chauhan teaches.

As per Claim 9.

wherein the load measurements comprise latency measurements (at least col. 2, lines 1-9, 42-57).

As per Claim 10.

wherein the performance metric measurements comprise any of: load CPU and memory measurements, HTTP response measurements, and FTP response measurements (load, ping) (at least col. 2, lines 14-33; col. 3, lines 54-66).

As per Claim 11.

Chauhan does not disclose caching static content. However, the use and advantages for using such caching is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Gurijala. Gurijala discloses wherein retrieving data from the caching server step comprises:

determining whether the caching server includes the data (at least Gurijala col. 2:31-50; 6:2-15);

retrieving data from a second customer web server from the plurality of mirrored customer web servers when the server does not include the data (at least Gurijala col. 2:31-50; 6:2-15); and

storing the data within the server (caching static content) (at least Gurijala col. 2:31-50; 6:2-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Gurijala's static page caching into Chauhan's system as this is very well known in the art as to how server caching is performed for client requested static content.

As per Claim 12.

wherein retrieving data from the second customer web server step comprises:

determining the second customer web server from the plurality of mirrored customer web servers, the second customer web server having a traffic load lower than traffic loads of remaining customer web servers from the plurality of mirrored customer web servers (at least col. 2, lines 14-33; col. 3, lines 39-53); and

retrieving the data from the second customer web server (download content) (at least col. 2, lines 1-9).

As per Claim 13.

receiving a first request from a second client DNS server to resolve a third domain name, the second client DNS server receiving a request from a second user of a second web page address that includes the third domain name (at least Fig. 4);

determining load measurements of a plurality of second customer web servers among a customer's plurality of web servers, each of the second customer web servers addressable by the third domain name, and each of the second customer web servers

storing data configured to service the request from the second user (mirrored servers) (at least Fig. 4);

determining a second customer web server from the plurality of second customer web servers, the second customer web server having a traffic load lower than traffic loads of other second customer web servers from the plurality of second customer web servers; determining an IP address of the second customer web server (at least col. 2, lines 14-33; col. 3, lines 39-53); and

providing the IP address of the second customer web server to the second client DNS server (IP2) (at least Fig. 4).

As per Claim 14.

Chauhan inherently discloses more than one user using the system, and that with any user, the mirror site with the best performance characteristics will be chosen as the server to retrieve content from thereon:

receiving a second request from the second client DNS server to resolve the second domain name, the second client DNS server receiving a request from the second user of a second uniform resource locator that includes the second domain name (at least Fig. 4; col. 2, lines 10-33);

retrieving a second set of data from the caching server in response to the second uniform resource locator (at least Fig. 4; col. 2, lines 10-33); and

providing the second set of data to the user (at least Fig. 4; col. 2, lines 1-33).

Claims 21-34 do not substantially add or define any additional limitations over claims 1-14 and therefore are rejected for similar reasons.

Response to Arguments

7. Applicant's arguments filed 27 October 2008 have been fully considered but they are not persuasive.

Applicant argues Gurijala does not teach a distinction between cache servers and a customer's plurality of web servers. However, Gurijala clearly teaches web (internet) cache servers residing between the Intranet and Internet (col. 1:49-60; Fig. 1) and caching the (static) content of (different) web servers, such as web server 112. This is where Chauhan fits in, as Chauhan teaches multiple mirrored web servers of Gurijala's web server 112. It would be obvious to use Gurijala's system to cache static content for web clients within an Intranet, and when Internet access is required for content that varies or has expired, as Gurijala teaches, to use Chauhan's system to use a load balanced mirrored web server to retrieve such content.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Newly cited Hsu et al, in addition to previously cited Edelstein et al, Dujari et al, Scharber, Guenther et al, Shimomura et al (see col. 14, lines 15-27), Lara et al, Kenner et al, Levy, Jordan et al, Kumar et al, Jacobs et al, Amicangioli, Heddaya et al, Schuba, Bharat et al, Lewis et al, O'Neil et al, Bolton et al, Emens et al, Shah, Leighton et al, Logan et al, Rune, Sitaraman et al, Malcolm, Herriot, Kapoor, and Gupta et al are cited for disclosing pertinent information related to the claimed invention.

Art Unit: 2457

Applicants are requested to consider the prior art reference for relevant teachings when responding to this office action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY G. TODD whose telephone number is (571)272-4011. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm w/ first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/G. G. T./
Examiner, Art Unit 2457
/Salad Abdullahi/
Primary Examiner, Art Unit 2457